

Temperature and rainfall data for the cotton districts, May, 1886.

Districts.	Rainfall.			Temperature.								Extremes for May, 1886.			
	Average for May of four preceding years.	Average for May, 1886.	Departures.	Maximum.				Minimum.							
				Mean for May of four pre- ceding years.	Mean for May, 1886.	Departures.	Mean for May of four pre- ceding years.	Mean for May, 1886.	Departures.						
	<i>Inch.</i>	<i>Inch.</i>	<i>Inch.</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>	<i>°</i>
New Orleans.....	5.46	1.11	- 4.35	83.7	86.6	+ 2.9	62.6	65.2	+ 2.6	104	47				
Savannah.....	3.12	2.89	- 0.23	85.5	85.8	+ 0.3	62.0	62.8	+ 0.8	99	44				
Charleston.....	3.46	1.98	- 1.48	83.2	84.9	+ 1.7	59.5	58.9	- 0.6	98	40				
Atlanta.....	3.02	5.95	+ 2.93	81.0	81.8	+ 0.8	56.4	58.3	+ 1.9	98	41				
Wilmington.....	3.71	4.94	+ 1.23	79.2	83.1	+ 3.9	56.1	59.0	+ 2.9	98	40				
Memphis.....	4.69	3.49	- 1.20	83.8	82.4	- 1.4	56.4	57.7	+ 1.3	97	30				
Galveston.....	6.53	0.26	- 6.27	83.8	87.9	+ 4.1	62.2	64.7	+ 2.5	101	48				
Vicksburg.....	5.79	1.87	- 3.92	82.0	84.7	+ 2.7	60.3	62.0	+ 1.7	97	41				
Montgomery.....	3.23	3.36	+ 0.13	83.5	84.4	+ 0.9	58.7	59.3	+ 0.6	97	39				
Augusta.....	3.17	5.42	+ 2.25	83.3	84.1	+ 0.8	58.8	60.1	+ 1.3	97	42				
Little Rock.....	5.85	0.80	- 5.05	79.8	85.5	+ 5.7	65.3	66.0	+ 0.7	99	41				
Mobile.....	3.96	2.47	- 1.49	83.3	85.1	+ 1.8	60.1	58.8	- 1.3	99	43				

TEMPERATURE OF WATER.

The following table shows the highest and lowest temperatures of water observed at the several stations; the monthly ranges of water temperature; the average depth at which the observations were made; and the mean temperature of the air:

Temperature of water for May, 1886.

Station.	Temperature at bottom.		Range.	Average depth, feet and tenths.	Mean temperature of the air at station.
	Max.	Min.			
Atlantic City, New Jersey.....	59.1	48.8	9.3	10.2	57.0
Alpena, Michigan.....	60.7	48.8	11.9	12.7	49.6
Augusta, Georgia.....	78.2	65.0	13.2	12.4	72.2
Baltimore, Maryland.....	66.3	52.6	13.7	11.0	61.9
Block Island, Rhode Island.....	55.2	46.2	9.0	8.5	53.5
Boston, Massachusetts.....	57.7	52.0	5.7	19.6	56.2
Buffalo, New York.....	57.4	46.6	10.8	10.1	53.1
Canby, Fort, Washington Territory.....	59.0	50.4	8.6	16.1	52.1
Cedar Keys, Florida.....	79.9	73.7	6.2	8.2	74.0
Charleston, South Carolina.....	77.5	67.6	9.9	38.2	72.8
Chicago, Illinois.....	64.4	46.0	18.4	8.5	57.0
Chincoteague, Virginia.....	71.5	53.9	17.6	3.0	59.6
Cleveland, Ohio.....	63.4	48.3	15.1	14.0	57.4
Detroit, Michigan.....	58.1	46.8	11.3	26.9	58.4
Duluth, Minnesota.....	39.9	36.1	3.8	10.9	52.2
Eastport, Maine.....	43.0	38.4	4.6	16.2	47.0
Escanaba, Michigan.....	56.9	42.0	14.9	18.4	50.0
Galveston, Texas.....	84.6	70.0	14.6	12.9	74.6
Grand Haven, Michigan.....	68.6	58.5	10.1	19.0	52.3
Indianola, Texas.....					
Jacksonville, Florida.....	82.7	74.5	8.2	18.0	75.8
Key West, Florida.....	86.5	76.5	10.0	17.6	78.9
Mackinaw City, Michigan.....	50.1	39.0	11.1	10.0	49.9
Macon, Fort, North Carolina.....	70.0	59.0	11.0	11.1	68.1
Marquette, Michigan.....	54.1	37.5	16.6	11.6	49.4
Milwaukee, Wisconsin.....	58.0	40.5	17.5	8.0	54.3
Mobile, Alabama.....	79.0	67.7	11.3	17.6	72.2
New Haven, Connecticut.....	61.0	51.0	10.0	16.8	56.6
New London, Connecticut.....	66.6	45.6	21.0	13.0	56.8
New York City.....	60.0	53.0	7.0	17.0	58.5
Norfolk, Virginia.....	71.2	56.0	15.2	16.4	65.0
Pensacola, Florida.....	76.9	69.1	7.8	17.5	73.8
Portland, Maine.....	52.7	43.3	9.4	16.2	53.1
Portland, Oregon.....	64.6	52.4	12.2	52.9	57.7
Sandusky, Ohio.....	69.2	57.4	11.8	11.3	59.5
Sandy Hook, New Jersey.....	64.3	50.0	14.3	11.8	57.9
San Francisco, California.....	62.3	56.5	5.8	37.3	57.8
Savannah, Georgia.....	77.2	68.0	9.2	10.0	75.0
Smithville, North Carolina.....	78.1	63.1	15.0	11.0	70.2
Toledo, Ohio.....	72.2	60.1	12.1	13.3	52.7
Wilmington, North Carolina.....	74.5	64.9	9.6	10.0	70.2

* Record for 30 days; lake too rough to take observation on the 7th. † Frozen first four days of month. Observations interrupted by ice in bay 7th to 10th, 12th, 13th, 15th, 20th, 21st. ‡ Observations temporarily suspended. § Record for the first 20 days.

WINDS.

The most frequent directions of the wind during May, 1886, are shown on chart ii by the arrows flying with the wind; they are also given in the tables of miscellaneous meteorological data. In the lower lake region, the south Atlantic and east Gulf states, the prevailing direction of the wind is from the southwest, in the west Gulf states and Texas it is from the south and southeast. In the Extreme Northwest and the Upper Mississippi Valley the winds are generally from the north and northwest; in other districts they are variable.

HIGH WINDS.

[In miles per hour.]

Wind-velocities of fifty or more miles per hour were reported during the month as follows:

Mount Washington, New Hampshire, 59, nw., 4th; 80, w., 5th; 54, w., 9th; 60, w., 10th; 58, se. and e., 11th; 50, w., 12th; 82, s., 15th; 88, s., 16th; 62, nw., 17th; 54, nw., 19th; 78, nw., 20th; 62, nw., 21st; 70, w., 22d; 54, w., 23d; 70, w., 25th; 80, nw., 26th; 58, nw., 27th; 50, nw., 28th; 60, nw., 29th; 58, nw., 30th.

Pike's Peak, Colorado, 60, w., 1st; 60, sw., 3d; 74, w., 5th; 68, w., 8th; 66, w., 9th; 56, w., 10th; 72, sw., 13th; 52, w., 31st.

Valentine, Nebraska, 54, e., 9th.

Kitty Hawk, North Carolina, 56, n., 1st.

Cape Henry, Virginia, 60, nw., 1st; 54, n., 2d.

Chincoteague, Virginia, 50, ne., 1st.

LOCAL STORMS AND TORNADOES.

La Plata, Macon county, Missouri: a heavy wind storm prevailed here on the night of the 4-5th. Orchards, fences, and small houses were leveled to the ground, and cattle killed. Owing to the violence of the storm many persons sought refuge in cellars.

Woodstock, McHenry county, Illinois: the portion of country lying between the towns of Ringwood and McHenry, in this county, was visited on the 6th by a tornado, which was very disastrous to farmers in the small area over which it passed. At noon the atmosphere was clear and warm, temperature rising until about 2 p. m., when the sky to the north became overcast with heavy black clouds; the sultry air suddenly began to get very cool, the mercury falling several degrees in a few minutes. The northern clouds grew blacker and moved southward, and the lull which had followed the first cool breeze was suddenly broken by the roar of the tornado. Trees bent before the blast like grain, and the smaller ones were snapped in pieces or twisted from the earth by the roots. The air was filled with flying limbs, pieces of boards, and other objects. Two men were killed, and several persons injured.

Oskaloosa, Mahaska county, Iowa: on the 9th, a violent wind storm did considerable damage to property; houses were unroofed, trees and fences blown down, and the amphitheatre in the fair grounds was wrecked.

Pittsburg, Pennsylvania: reports from points along the Conemaugh Valley, in Indiana county, indicate the occurrence of a tornado in that section on the evening of the 10th. Several persons were seriously injured. Descriptions of this tornado say that telegraph poles along the railroad were blown down, cows were killed and trees were blown fully two hundred feet in the air, while many fences and small buildings were destroyed.

McConnellsburg, Indiana county, Pennsylvania: the Methodist Episcopal church was struck by lightning during the evening of the 10th and considerably damaged. Two men engaged in burning lime were prostrated by a bolt of lightning and two horses killed.

Blairsville, Indiana county, Pennsylvania: a heavy hail storm passed over this place about 6 p. m. of the 10th, and was followed by a tornado which swept from Salina along the valley of the Conemaugh River to Coketown, cutting down trees and destroying numerous outhouses and barns. It caused the water in the river to rise to the height of seventy-five feet, in the form of an inverted water-spout, which revolved about a moving centre, travelling across and up the stream until it reached the new Coketown bridge, an iron structure five hundred and twenty feet long, which was damaged to the extent of \$5,000. The tornado left the river at this point and continued across the country, blowing down telegraph poles, trees, smoke-stacks, and barns. Near Conemaugh a number of freight cars were standing on a siding; the tornado lifted them bodily from the track and dashed them to the ground.

Kansas City, Missouri: a very disastrous tornado occurred at